

**Abstract**

The present invention discloses a method for obtaining image reference block in a code mode of fixed reference frame number, comprising the steps of: performing motion estimation for each block of a current B frame and obtaining a motion vector MV of a corresponding block of a backward reference frame; discriminating whether the motion vector is beyond a maximum forward reference frame which is possibly pointed by the B frame, if not, then calculating the forward and backward motion vectors in a normal way; if yes, then using the motion vector of the forward reference frame that the B frame can obtain in the same direction to replace the motion vector of the corresponding block in the backward reference, and calculating the forward and the backward motion vectors of the B frame; finally, two image blocks pointed by the final obtained forward and backward motion vectors as the image reference blocks corresponding to the macro block. The present invention solves the possibly appeared problem of un-matching motion vectors, and can guarantee the coding efficiency to the largest extent.